The Pugwash Conferences on Science and World Affairs seek to further the principles, values and aims set out in the Russell-Einstein manifesto of July 1955. Spearheaded by Bertrand Russell and Albert Einstein, the manifesto was signed by an international cohort of leading scientists, including Frederic Joliot Curie and Joseph Rotblat, called for an end to the nuclear arms race and nuclear bomb tests. It emphasized instead the need for a new dialogue between East and West, and a new way of thinking, expressed in its message to ‘remember your humanity and forget the rest’. Pugwash represented a distinctive form of activism giving expression to scientists’ evolving sense of social responsibility. The first meeting, held in Canada in July 1957, brought together scientists from across a divided and troubled world to discuss the pressing problems of the nuclear age. Over time, it provided a unique channel of communication between east and west, serving as a valuable forum for ‘second track’ diplomacy. Into the present it continues to offer opportunity for transnational dialogue, retaining its founding interest in nuclear weapons whilst widening its scope of interest to include some of the pressing problems facing contemporary society, locally and globally, including climate change, biological weapons and poverty. Its sustained contribution to fostering dialogue across political divides, national boundaries and cultural differences was recognized in the award of the Nobel Peace Prize in 1995.

The purpose of this international workshop, organized by Silke Fengler and Carola Sachse (Vienna), Holger Nehring (Sheffield/German Association for Historical Peace Research) and Alison Kraft (Exeter), and generously funded by the Historisch-Kulturwissenschaftliche Fakultät der Universität Wien, the FWF, Deutsche Stiftung Friedensforschung and Wien Kultur, was to forge new historical engagement with Pugwash. The meeting sought to begin building new understanding of its activities, development and achievements, and of its
significance for the evolving relationships between science, scientists and the state in the context of the global history of the atomic age. In organizational terms, and as a local and global actor spanning sixty years, Pugwash is unique. For historians it presents a range of conceptual and methodological challenges. To address its histories requires diverse approaches. To this end, the workshop brought together a diverse group of international scholars - historians of international relations, science and technology, and of social movements - to analyse the role of Pugwash as a transnational actor in international politics. The group identified a number of questions which the workshop sought to address. How are we to understand Pugwash as a movement or an organization? Its distinctive characteristics - the rotating membership, multi-centrality, the coupling of national/international presence - make it difficult to classify. Is Pugwash a modern NGO or more like a professional network with a unique role as interlocutor between science and politics? To what extent has it been used - and can it still serve as - a forum for second track diplomacy? A history spanning six decades calls for some sort of periodization – but how to do this in a way that is historically meaningful and adds analytical clarity? What factors animated individual participation and how, why and in what ways has the membership changed and its structures evolved? We need also to understand why and how the focus of Pugwash has diversified over time as it has sought to engage with the evolving challenges within global politics. There is, too, the crucial question of its relationship to governments through time and how such relationships were forged and maintained. Any history must also deal with the problem of how to gauge and assess the impact of Pugwash; what have been its successes and failures, and how are these defined and judged?

In her opening remarks, Carola Sachse emphasized the need for a multi-faceted approach of interconnected local/national histories. To this end, she argued for a need to establish a large cooperative network of historians to tackle Pugwash and it was here that this workshop sought also to make an important contribution.

In a thoughtful and entertaining keynote address (How Scientists Helped end the Cold War: Approaches to “Pugwash History”), Matthew Evangelista emphasized a number of points for consideration. Any history would, for example, necessitate careful consideration and perhaps rethinking concepts of barriers, since differences between factions within either East or West could be greater than those between East and West. Analytically, within each setting, it is useful to think in terms of structure and opportunity – and how these have shaped the development of Pugwash in different settings through time. He emphasized too the need to understand the importance for the movement of antecedent social and professional networks. Particular attention would need to be paid to the question of impact – how and in what ways did Pugwash shape policy? This was a methodological problem for historians generally, but was especially salient for evaluating the successes and failures of Pugwash and characterizing its legacy – and building its future. This prompted reflections on the situation(s) now confronting Pugwash. Discussion ranged across the very different dynamics of the contemporary setting, in which the former East/West divide had been replaced with a complex array of diverse actors – individuals and groups within nations, and nations – characterized by different rationalities. There was too the issue of how technological advances in weapons design – for example, improved delivery systems and ‘kill-ability’ - had rendered problematic an approach to arms reduction focused exclusively
on the principle of numerical reduction. One response within Pugwash has been a strategic widening of its membership and participation at meetings, which increasingly included more diplomats, social scientists and women as well as representatives from a wider range of countries.

Paolo Cotta-Ramusino, Secretary General of Pugwash, shared his experiences as a practitioner of transnational diplomacy. He then went on to ask whether, by contrast with the earlier period, there had been a reduction in the influence of scientists within the movement and in society more generally, linking this to the broader question about the way in which the scientist’s role as intellectual has changed since the late 1950s. Cotta-Ramusino argued that Pugwash should not just been seen as purely a grouping of scientists, emphasizing instead its role as a civil society actor. The involvement of civil society, he pointed out, was key for extending its societal connections and political influence. Noting the changed significance of nuclear weapons, he emphasized how the contemporary political landscape this contrasts markedly with the old USA/USSR axis. In practice, this has meant that many more states with diverse agendas had to be taken into account with all the complexity this entails. He concluded by emphasizing the need for Pugwash to adapt and change in order both to be relevant to different groups and target its resources effectively.

The workshop discussed these issues along three interconnected themes: the interaction between international and domestic politics and the history of science and technology in the early history of the Pugwash movement; the ways in which biographies of Pugwash activists might offer inroads into the complexities of writing a transnational history of the movement; and the interaction between the local and the global in framing Pugwash activities.

Early History of the Pugwash Movement

The first panel focused on the early history of Pugwash during the 1950s in the UK, USSR and Austria raising the issue of the nationally specific meanings of political responsibility and the role of political affiliations in the context of the binary ideological divisions of the early Cold War. This comprised three papers covering particular aspects of development in the UK, USSR and Austria. Christoph Laucht examined the importance of the UK Atomic Scientists’ Association (ASA) for the British origins of Pugwash. Founded in 1946 and disbanded in 1959, the experience, characteristics and the policies of the ASA were dominated by the principle of ‘political neutrality’. This made for enduring difficulties given a membership divided along political lines, and between government ‘insiders’ and ‘outsiders’. The adoption/maintenance of a position/strategy of ‘political neutrality’ served, in effect, to stymie the ASA as a critical and effective political force, both within the UK and beyond. One effect of the political constraints encountered by the ASA was an emphasis on public education/engagement activities, exemplified in the hugely successful ‘atom train’. This was a focus of questions as was the issue of primary sources, where the papers of Joseph Rotblat and Rudolf Peierls have proved particularly important for the ASA and its relationship to Pugwash.
In his paper examining the significance of the Communist Peace Movement (CPM) for Pugwash in the Soviet Union, Geoffrey Roberts firstly challenged the perception of the CPM as a transitory and, ultimately, failed transnational movement, arguing its importance – through its promotion of peaceful coexistence - in redefining Soviet identity in the mid-1950s. He also questioned prevailing accounts of the CPM which portray it as wholly dominated by Moscow/the Kremlin, arguing instead that the CPM had more independence than hitherto recognized. He then emphasized how, through its impact in shaping Soviet identity and foreign policy, the CPM can be seen as playing a key role in rendering engagement with Pugwash possible and desirable, paving the way for its transnational and pro-peace agenda. Discussion centred on the extent of the CPM’s political influence in Moscow and its importance in shaping public opinion given that other factors were also in play in powerfully shaping Soviet identity and policy at this time. The speaker defended his position, arguing that whilst the CPM may not have been the whole story, it was a contributory – and overlooked - factor.

Elisabeth Roehrlich focused on the third Pugwash meeting held in Austria in 1958. This was situated in the context of the Second UN Geneva Conference on the Peaceful Uses of Atomic Energy, and the Second International Atomic Energy Agency General Conference (Vienna) which took place in the same year. The aims of and links between these events were compared, and the participation of different nations in each analysed: which countries attended which meeting, what factors influenced patterns of attendance and in what ways did this reflect the view of Pugwash/Atoms for Peace/the IAEA in different national settings? The importance of each meeting in facilitating cross-border dialogue was examined. It was noted that the 1958 Pugwash meeting - especially significant for the Vienna Declaration - may have served a wider political role in Vienna in terms of creating an Austrian national identity centred on a view of itself as a bridge between East/West. The 1958 Pugwash became somewhat politicized, drawing criticism in some quarters for being funded by the Soviets and the Austrian socialists. The issue of ‘political neutrality’ and the difficulties this engendered in each national setting formed a major topic of discussion. (Sandra Ionno Butcher). A further point of discussion concerned how Pugwash positioned itself in regard to the “Atoms for Peace” initiative, and especially the promotion of civic atomic energy, in the 1950’s.

Biographical Approaches

Developing one aspect of the politics of Pugwash further, the papers in the second panel employed biographical approaches in order to highlight the ambiguities of local and national conditions and global networks. They focused on the ways in which Pugwash politics depended on, framed and recast personal networks and other social relationships across nation-state boundaries. Drawing on his recent book, Andrew Brown discussed the life and work of Joseph Rotblat, placing this hugely influential figure at the centre of an extensive network of professional and personal relationships both of which were vital to his role and the development of Pugwash. The British government position on Pugwash was one of ambivalence and unease, with some viewing it as a communist front. Lodovica Clavarino’s analysis of Edoardo Amaldi’s experience in post-war Italy revealed the difficulties of operating in a landscape of coalition politics in a defeated nation and in the
context of questions of proliferation, disarmament and internationalism in Italian foreign and defence policy. Drawing attention to the sense of shock in Italy at the use of the atomic bomb against Japan, which, she argued, was a ‘moral tipping point’ for Italy, she noted how Pugwash subsequently gained momentum, albeit in ways tempered by fears of appearing pro-communist. In Gordon Barrett’s paper, the focus shifted to China and specifically an examination of the experience of physicist Zhou Peiyuan, the face and voice of Chinese science. Politically well-connected, Zhou became the country’s principal conduit for Pugwash. Barrett highlighted how the biographical approach might help us to understand how one scientist, who by connections, experience and reputation, was able to negotiate a pathway to participation in the movement amid the highly regulated and controlled strictures of the regime. This aspect, and Zhou’s position relative to political actors and the evolving political landscape, formed a main point of discussion.

These papers highlighted the importance of personal relationships and networks for the inception and maintenance of Pugwash in very different national settings. This underlined too the difficulties faced by the movement in the absence of networks, including with powerful political actors, and/or when these networks ‘falter’ or become stymied. In discussion it was acknowledged that, as an approach to history, biography has inherent limitations and problems. This panel brought into view the value/strengths of biography by connecting lived lives with social history and embedding the analysis within the particular national setting. That is to say, each emphasized what lived lives can/do tell us about a society – its politics, institutions, cultures – analysed here specifically with respect to the distinctive character and dynamics of the Pugwash movement in each setting. There was agreement that biography is of particular value in characterizing and understanding Pugwash, moving away from linear accounts and facilitating rich comparative histories.

The local and the global

The third set of papers discussed the ways in which local politics and the global issue of nuclear armaments interacted employing specific national case studies in order to explore these connections. All papers highlighted that the history of Pugwash is inherently a history of knowledge, knowledge creation, and its political salience.

The first of these focused on Japan and Germany, both defeated nations and in this period steeped in the process of political rehabilitation and national reconstruction. With strong peace and anti-nuclear movements, and because of events in Hiroshima and Nagasaki in August 1945 uniquely placed in regard to atomic weapons, Japan occupies a pivotal place in nuclear history. In his paper, Akira Kurosaki emphasized the centrality of Japanese Pugwash in developing a critique of the concept of nuclear deterrence, challenging the rhetorical and strategic dominance of this principle in the arms race. To this end, Japanese Pugwash-ites sought to bring the emphasis back to the Russell-Einstein manifesto, a strategy seen most clearly later in the organization for the Kyoto meeting in 1975. In her paper, Julia Kleinschmidt highlighted the distinctive position of West German science and, in particular, those physicists – Heisenberg, von Weizsäcker, Hahn and others - connected to the wartime Uranverein. Concerned to analyze how this experience subsequently shaped the sensibilities, identity and position of West German scientists with respect to the arms
race and the ways in which it influenced their engagement with – and arguably inertia towards – Pugwash. Central here was the notion of political neutrality where West German scientists sought to remain detached from politics and policy, a position exemplified in the Göttingen Declaration. Uneasy in advisory roles to government, they emphasized an identity as detached scholars who saw themselves as differently placed with regard to Pugwash. The contested and controversial issue of Nazi-Germany’s atomic bomb project and the vilification of German atomic scientists instilled a distinctive sensibility within this generation/cohort that profoundly shaped subsequent perceptions of them, their politics and their careers.

Discussion of these papers revolved around three themes. That these were all large but defeated nations raised the question of national reconstruction including engagement with/building anew a role in international relations. Eg: 1950s – The Federal Republic of Germany positioning itself in Europe and relative to the USSR. It also points to the need to understand perceptions of Pugwash and specifically the ways in which it might have been seen to ‘serve’ reconstruction agendas and the politics of the past in different ways in different settings.

The second local/global panel included perspective on Pugwash in Czechoslovakia and in the US. In her paper, Doubravka Olsakova analysed the formation and fate of the Pugwash movement within Czechoslovakia between 1960 and 1972. The Czech and Eastern European perspective emphasizes the role of Frederic Joliot Curie in the formation of Pugwash, which contrasts with the dominant ‘western’ account in which emphasis is given to Einstein and Russell in its inception. Czech participation in Pugwash began at the sixth meeting of the movement held in Moscow in 1960 and was largely the result of Soviet influence. The drive for Czech involvement in Pugwash was strongly shaped by developments in West Germany and by concerns about what was seen as growing militarism, chauvinism and revanchism in West German science. The Czech Academy of Science sought to resist Soviet influence which engendered mounting tensions with Czech scientists, especially those spearheading involvement with Pugwash, notably Frantisek Sorm and Ivan Malek. The Pugwash meeting in Nice in September 1968 – just after the invasion – proved a turning point for Pugwash in Czechoslovakia. This marked the onset of its decline – brought about not least by the constraints placed by the Soviets on both the careers and Pugwash-related activities of Sorm and Malek – and foreshadowed the end of the Czech Pugwash movement in 1972.

In response to a question about the late 1950s, the speaker noted that attempts to promote transnational dialogue between East European scientists, including within Czechoslovakia, during this period, notably by Petr Kapitza and by the World Federation of Scientific Workers, came to nothing. The timing of the initial Czech participation in Pugwash relative to/coincident with the resumption of atmospheric nuclear testing by the Soviets in September 1961 drew comment, specifically as to whether, by the time of the Moscow meeting, some Soviet scientists were already aware of this.

With Ronald E. Doel’s paper, the focus moved across the Atlantic and the unresolved issue of scientific internationalism and how the White House managed its position on Pugwash.
The speaker began by noting the absence of Pugwash from scholarship in the history of science, questioning its apparent lack of visibility and suggesting that perhaps the time has come for historians of science to engage with this topic not least since it promises new understanding of the political significance of scientists, and of their place, in the Cold War. He focused on the tension between trying to maintain US participation in Pugwash, something seen to be strategically and politically important, whilst ensuring that participation was in keeping with the domestic/national priorities of the US. The analysis situated this in the context of the on-going debate within the US about scientific internationalism – which remains unresolved. As policy advisors, scientists became an integral part of Washington D.C. and White House circles. Science was viewed by some as a diplomatic tool (eg: weather control) and the issue of scientific internationalism remained problematic throughout the Eisenhower, Kennedy and Johnson administrations. The management and characteristics of scientific internationalism and of the relationship between the White House and scientists changed through the course of these presidencies. Meanwhile, Pugwash constituted one dimension of scientific internationalism. The US view of Pugwash was that it was following the Soviet line and was, at best, left of centre. We have stronger sense of this perspective and the political dynamic it created during the Johnson presidency. Johnson can be argued to have kept Pugwash in view without actually, officially, explicitly supporting it. This strategy of steering clear of official entanglement with Pugwash without appearing ‘anti-Pugwash’ was exemplified by his decision not to send a message of support to the Pugwash meeting in 1967 – prompted by Ambassador Rostow.

The final panel comprised British, Austrian and German perspectives. Alison Kraft analysed the ways in which the issue of fallout and specifically the dangers to health of radiation, impacted the British post-war perspective on nuclear weapons. She then highlighted potential links from this to the British engagement in Pugwash. She argued that as radiation became a central problem of the nuclear age, the intellectual debate and public discussion on radioactive fallout from nuclear testing were reflected in the broadening of Pugwash interests, emphasizing too how the radiological effects of fallout were a critical element in its growing political profile. She noted too how the fallout issue, and especially fears about the effects of radiostrontium, formed a key means by which the British public engaged with and began to question the arms race and government policies relating to nuclear proliferation and testing. This was, in part, due to the efforts of Joseph Rotblat in highlighting the dangers of fallout, firstly via the ASA and then Pugwash. Continuing uncertainty surrounding these dangers meant that scientific opinion was divided on the matter and amid Cold War tensions, the debate became highly politicized – exemplified in the formulation of and responses to the 1956 Medical Research Council Report on the dangers of radiation generally and of fallout.

Silke Fengler analysed the Austrian experience and observed that Pugwash scientists were able to play an advisory role to politicians, something that was facilitated by Austria’s distinctive post-war situation and the aims of its politicians. Austria’s neutrality and the government’s determination to cement this and avoid engagement with certain western organizations, while safeguarding itself from undue influence by the USSR, powerfully shaped the Austrian engagement with Pugwash. Financial support of Pugwash raised the
Austrian profile and it was argued that this support was due to a conformity of interest that
was also seen as furthering the aims of Austrian politicians about the security and
neutralit of the country and its place/claim to a leading role as interlocutor between East
and West. She argued, however, that the impact on policy and in shaping public perceptions
was limited. In discussion it was noted that the transnational dimension is perhaps the
most interesting in the Austrian context where Pugwash was seen as a tool for Austrian
politicians.

The closing paper of the workshop was given by Carola Sachse. It examined the
relationships between the West German Pugwash group, the Federation of German
Scientists and the country’s biggest research institute, the Max Planck Society (MPS). This
was, she noted, an interesting dynamic of asymmetric relations between a kind of NGO, an
intermediary organization and a research institution devoting itself to what it defined as
“pure basic research”. The questions she addressed included why the West German
experience, with limited engagement but a highly structured, institutional approach was so
different to that of other countries. She noted that many of the most prominent scientists
chose not to be involved in transnational activities, including engaging with Pugwash, in
part to avoid casting doubt about their loyalty to the Federal Republic and its American
and West European Allies.

Several points were raised in discussion, including the extent to which the narrative here
reflects a peculiarly German story and how the story is fundamentally one of the
relationships between elites and wider society. The MPS had existing/on-going strong
connections with the federal government and with international scientific elites whilst
there was some ambivalence to Pugwash. The difficult position of the German Uranium
scientists was a key talking point, as was the different coverage of/responses to the

**Discussions, conclusions and open questions**

A number of points emerged from the wide-ranging papers and ensuing post-panel
discussions.

In their final comments Holger Nehring and John Krige addressed several fundamental
questions that the papers had raised and that pointed towards the need for further
research. The first set of themes was the role of international relations in framing the
activities of the Pugwash movement and in creating conditions of possibility for its
activities. In connection to this, (prevailing and shifting) geopolitics can be understood as
an enabling (or constraining) condition. It was the changing geopolitical context between
1945 and 1957 which made it possible and desirable for Soviet and US scientists and
politicians to play the critical role in the creation of such a forum. The 1957 détente,
discussions on the NPT and a growing anti-fascist sensibility, combined in ways that
allowed a coming together not previously possible to create an environment conducive to
the founding of Pugwash. The wider international context, encompassing the political
situation in many national settings, for example, the ambivalence of some senior German
scientists, must be integrated into its history. At the same time, the pattern of engagement within different countries can tell us much about that polity, its politics, values and agenda.

A second theme concerned the difficult question of transnationalism. As an analytical approach within historical scholarship, this has long been contested and the different elements/actors present in the Pugwash story – individuals, institutions, national governments interacting across national boundaries – make it a rich and complex site of transnational activity. It will be necessary to examine and define the meaning(s) of transnationalism carefully as it emerged in multiple and diverse ways, took shape and evolved under the auspices of Pugwash. What, if anything, was distinctive about transnationalism as articulated within Pugwash? To what extent did this reflect its emergence within specific national framings? Did transnationalism take on particular forms and meanings within different political, economic and cultural settings? One can ask too about the extent to which Pugwash served as a resource for prestige and how this engendered particular forms of transnational activity.

A third key theme remerging from the constituent panels and discussion during the workshop concerned the politics of knowledge creation. One reading of Pugwash emphasizes how it was created by and served the interests of a scientific elite. Alongside this it has been seen as emphasizing and perhaps privileging scientific knowledge which was also being created within its networks – here one can, for example, think of the radioactive fallout issue.

In general, the papers presented at this stimulating workshop highlighted the ways in which scholars might write the history of Pugwash in the context of a transnationally informed, inter-disciplinary history of scientists and of science and technology in the Cold War. It highlighted the activities of individuals, institutions and national governments behaving in ways that reflected particular national political, economic and cultural contexts and national agendas, the importance of friendship networks, the question of elites (including differences within/between elites and their relationship/interaction with wider society), the role Pugwash could play in national reconstruction and in reframing national identity (Austria) and how its development differed in defeated and neutral nations. The workshop has therefore laid the foundation stone for historical research on Pugwash to better understand its nature, its place in the Cold War as well as its significance as a site for transnationalism.

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